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- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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PRODUCT INFORMATION



TNF- β (human, recombinant)

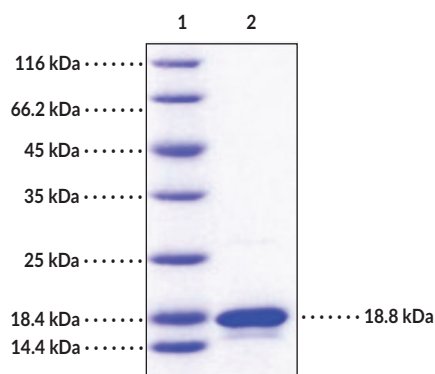
Item No. 40210

Overview and Properties

Synonyms:	LTA, LT- α , Lymphotoxin- α , TNFSF1, Tumor Necrosis Factor- β , Tumor Necrosis Factor Ligand Superfamily Member 1
Source:	Active recombinant human TNF- β expressed in <i>E. coli</i>
Amino Acids:	35-205
Uniprot No.:	P01374
Molecular Weight:	18.8 kDa
Storage:	-80°C (as supplied)
Stability:	≥ 1 year
Purity:	$\geq 97\%$ estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile 50 mM Tris, pH 8.0
Activity:	<i>batch specific</i> U/ml
Specific Activity:	<i>batch specific</i> U/mg

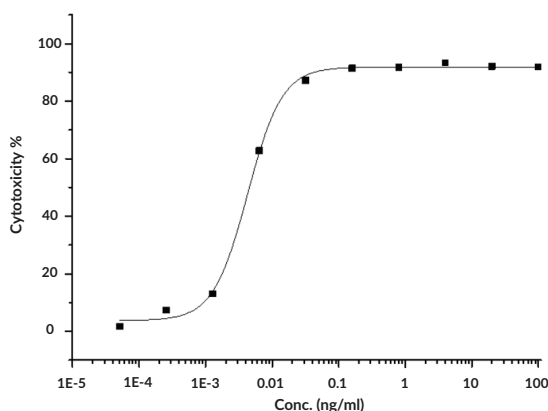
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: TNF- β

SDS-PAGE Analysis of TNF- β . This protein has a calculated molecular weight of 18.8 kDa.



Measured in a cytotoxicity assay using L929 mouse fibrosarcoma cells in the presence of the metabolic inhibitor actinomycin D. The EC₅₀ for this effect is typically 2-10 pg/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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PRODUCT INFORMATION



Description

TNF- β , also known as lymphotoxin- α (LT- α), is a cytokine and member of the TNF and TNF receptor (TNFR) cytokine superfamily.¹ It is produced as an N-glycosylated peptide that forms soluble bell-shaped homotrimers after signal peptide cleavage.^{2,3} TNF- β also forms cell surface-anchored heterotrimers with TNF-C, also known as lymphotoxin- β (LT- β).³ It is expressed in T cells, natural killer (NK) cells, and B cells, as well as macrophages. When secreted, TNF- β homotrimers bind to TNF- α receptor 1 (TNFR1) and TNFR2 while TNF- β -LT- β heterotrimers bind to the LT- β receptor.^{1,2,4} Through activation of these receptors, TNF- β is involved in lymphoid organ development and maintenance, host defense, and inflammatory processes.^{1,3} TNF- β induces proliferation of fibroblast-like synoviocytes isolated from patients with rheumatoid arthritis, and levels of TNF- β are increased in the serum and synovial fluid of patients with rheumatoid arthritis.⁵ SNPs in *LTA*, the gene encoding TNF- β in humans, are associated with various diseases, including systemic lupus erythematosus (SLE) and cancer.^{6,7} Cayman's TNF- β (human, recombinant) protein can be used for cellular activity assays. The protein was synthesized from a DNA sequence encoding the mature form of human TNF- β (Leu35-Leu205) with an N-terminal translation-initiating methionine (Met1). The expressed protein consists of 172 amino acids, has a calculated molecular weight of 18.8 kDa, and a predicted N-terminus of Met1.

References

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2. Idriss, H.T. and Naismith, J.H. TNF α and the TNF receptor superfamily: Structure-function relationship(s). *Microsc. Res. Tech.* **50(3)**, 184-195 (2000).
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